

Contemporary Features Demarche: From the Architectural Thought to the Detail – LVFC Paris. F.Gehry's Architecture

Marina Mihaila^{*1}

¹ Center for Studies in Contemporary Architecture. Ion Ionescu de la Brad Bd., 65, 013812, Bucharest, Romania; "Ion Mincu" University of Architecture and Urbanism, Faculty of Architecture. Academiei Str., 18-20, 010014, Bucharest, Romania

(Received 27 December 2014; Accepted 30 March 2015)

Abstract

Following conceptual scenographic manner that Gehry's architecture has accustomed us, LVFC-building resume favorite theme of the conceptual endeavor, in renewed form: a double artistically-technological-structural envelope meant to raise awareness of the public, but also to redefine more urban terms of the identity – iconicity, landscape-approach, local urban-scale, architecture-structure-detail relation. With Guggenheim Museum Bilbao (1997) Gehry made an iconic landscape statement of a new type, invading a small European town with his big scale theatrical shapes, that he accustomed us at Walt Disney Concert Hall in Los Angeles (1989), and even with his first entrance in design manufacturing site of Vitra Museum from Weil-am-Rhein (1989). If at Guggenheim Museum Bilbao, Dancing House Praga (1996), and American Centre in Paris – now Cinemateque Francaise (1994), iconism was generated through a conceptual approach of landscape macro scale, and a discussion pro and cons: laudatory and controversial on scale-texture relationship in urban predefined space, this iconism was expressed through a mass enveloped architecture smashed in a succession of forms meant to connect at a struggle almost invisible of the local atmosphere, and to vibrate the massiveness by metallic detailing, from the special structures to closures. Interesting in LVFC Paris building, besides resumption of special structures and advanced technological detailing themes as architecture manner, is appearance of a second envelope-tire, striking the floating, detached from the core of the volumes that close and define the museum spaces. This second structural envelope shape is an artistic gesture that uses the glass as confinement material.

Rezumat

Urmând maniera conceptuală scenografică cu care arhitectura lui Gehry ne-a obișnuit, clădirea LVFC reia tema preferată a demersului conceptual cunoscut a arhitectului într-o formă reînnoită: o anvelopantă dublă structural-tehologic-artistică menită să sensibilizeze publicul, dar și pentru a redefini încă o dată mai mulți termeni urbani ai identității – iconicitate, abordare peisageră, scară urbană locală, relația arhitectură-structură-detaliu. La Guggenheim Museum Bilbao (1997) Gehry făcea un statement iconic peisager de tip nou, invadând un orașel (cultural) european cu formele sale teatrale la scară mare cu care ne obișnuise la Walt Disney Concert Hall în Los Angeles (1989), și chiar cu prima sa intrare în campusul de fabricație de design de la Vitra Museum din Weil-am-Rhein (1989). Dacă la Guggenheim Museum în Bibao, dar și la Dancing House Praga (1996), și American Centre în Paris acum Cinemateque Francaise (1994) iconismul a fost generat deopotrivă printr-un demers conceptual de macro scară peisageră, și discuție pro-contra: laudativă dar și controversată vizavi de relația scară și textură în spațiul urban predefinit, acest

* Corresponding author: Tel.: +4 0745050502

E-mail address: marina.mihaila@arhitectonik.ro, arh_marina@yahoo.com

iconism era exprimat printr-o arhitectură de masă anvelopată printr-o spargere în suite de forme menite să se racordeze la un zbucium aproape invizibil al atmosferei locale, și de a vibra masivitatea prin detalierea metalică, de la structuri speciale până la închideri. Interesant la clădirea LVFC Paris, este, pe lângă reluarea temelor structurilor speciale și a detalierei avansate tehnologic ca manieră de arhitectură, și apariția unei a doua anvelopante, frapantă ca plutire, și desprinsă de inima volumelor care închid și definesc spațiile muzeului. Această a doua anvelopantă structurală este un gest artistic, care folosește sticla ca material de închidere.

Keywords: Architecture, special structures, urban structurality, macrostructures, museum space, design, concept

1. Introduction

Present paper is proposing a discourse about the expression of architecture based on case study LVFC building in Paris. Louis Vuitton Foundation pour Creation (LVFC) [1] Paris (opened in fall 2014) is one of the most representative and recent buildings realized in Paris by Frank Gehry, in the 16th Arondissement, near Bois de Bologne, and in the neighborhood of Jardin d'Acclimatation – Parc l'Ouest and Anthology Museum – (closed in present and in order to be moved to Marseille). In particular the discourse of the article is based on the statement of architecture as structure, which is designed from the thought to the detail to express in several ways this conception in the city global space - from the manifesto of architecture in Gehry's vision: "building is light, luminosity and motion" [1], to the spectacular urban macrostructure.

The paper is structured in 3 main parts: *The context - Contemporary Features Demarche - F.Gehry's Architecture - , From the Architectural Thought to the Detail – LVFC Paris, F.Gehry and Conclusions*. In the first part - *The context - Contemporary Features Demarche - F.Gehry's Architecture*, study focuses on Gehry's work as a state of the art, and as fashion in contemporary architecture, explaining these as processes of architecture that evolved with every realized building. From Gehry's first states of his new signature on architecture at Guggenheim Museum (1999) in Bilbao where this starts a new effect states as 'Bilbao effect' [2] in cultural revitalization on the city through architecture-museum implant, to Walt Disney Concert Hall (1999-2003) in Los Angeles, a precise touch is to be remark that is different than before in Gehry's gesture through architectural-structural shapes and volume modeling. Same touch and demarche is to be recognize in his design for Experience Music Project Center in Seattle, City of Wine Marqués de Riscal, and lately at Guggenheim Museum in Abu Dhabi and Bio Museo in Panama. The first part analyzes, besides theory, shapes characteristics from four (illustrated) examples of Gehry's architecture: Vitra Design Museum (1989), Dancing House, Fred & Ginger, Prague (1992-1996), Guggenheim Museum Bilbao (1997) and Walt Disney Concert Hall (1999-2003) in Los Angeles [3]. With these four examples, article illustrates the changes and mutations in Gehry's architectural design during process of imagining and building projects. Following the evolutionary architecture of Gehry is the proposed method of investigating and documenting design in progress. The second part - *From the Architectural Thought to the Detail – LVFC Paris, F.Gehry* - focuses on observing new gesture in author's architecture, new sense of narration on story of the conceptual design, the first idea and the demarche progress on design project. Notations on innovations in architecture and technology are important but also are the relations with past work of the architect. In last part of the article - *Conclusions* - there are presented main features that connect present work LVFC Paris with past work and architectural approach in Gehry's buildings, and also main progress and innovations in architecture – from demarche from the thought and concept – from the design of the structure to the improvements made in building enveloping and the connections with the story and the details. The article approach on the subject is the one of architect point of view, marking theory and features demarche on contemporary built architectures.

2. The context - Contemporary Features Demarche - F.Gehry's Architecture

Gehry accustomed us with revolutionary approaches on architecture and visions on the city context. In an own manner [3] he formed his own signature on his projects, being accused many times of superficiality, but none the less of theater applauded for his unmistakable style, and transforming. Few names in architecture are known after their designed styles, that defined a notable architecture but also a brand. Many of them have developed something it is called: a method of conceptual demarche on elaborating architecture, from initial idea that gives coherence and start of the story to the project, an evolving progress on modeling as belief and a continuous coherence in fabricating architecture as organism when formulating shapes and lines [4], structure, details and scenographic appearance but also when designing the assembling, and the technological engineering of the whole process. There is quite an interesting debate between the critics that belief Gehry is superficial in reaching lecturing and contextually relations on the built or even natural environments, and the ones who consider him very artistic and exquisite. Among the last there are not doubt also his beneficiaries that hired him to create icons for them and for the specific places, with a specific target to attract, innovate, entertain but also generate a trend or specific culture on the specific market – understood local or both global. “No, Gehry was by no means the inventor of the rather explosive cocktail of architecture, art, and big money that rules today’s museum world, even as economies falter.”[5]



Figure 1, 2. Vitra Design Museum, Weil am Rhein: entrance view, backyard view. Photo: M.Mihaila, 2009.



Figure 3, 4. Dancing House, Fred & Ginger, Prague: exterior view, detail view on the corner. Photo: M.Mihaila, 2009.

Vitra Design Museum [3] and manufacturing facility (Fig.1), built in 1989 and signed by Gehry, marks the first building of Gehry in Europe, invited to build an icon insertion at Vitra Campus, in Germany at Weil am Rhein – city in the neighborhood of two borders: Swiss and France, and extension of the Basel in Germany. (Vitra Center is worldwide known as one of the main design chairs manufactures from the world.) Vitra Design Museum opened n interesting chapter of shapes and flows in Gehry’s architectural modeling; with this project could be said that it begins Gehry’s experimentation on structural architectural and an expression of freedom in appearance. As Vitra Campus was offering plenty of openness and context of a free built environment and an exceptional

landscape, the playground was quite accessible to develop something to be remark as spectacle through architecture lines. So it could be said that architecture became spectacle and a conglomerate of shapes and forms (Fig.1-2) from the Vitra Design Museum moment. “If Gehry’s architecture is often nourished by art that ranges over several centuries, the sketches themselves are closer to modern and contemporary art.” [4]



Figure 5, 6, 7. Bilbao Guggenheim Museum, Bilbao: overview, entrance, detail, interior view. Photo: G.Zamfir, 2009.



Figure 8, 9, 10. Walt Disney Concert Hall, Los Angeles: scenographic view by night, day view, exterior view with walkside garden within shapes. Photo: G.Zamfir, 2012.

Dancing House/ Building (Fig.3), *Fred & Ginger*, Prague, built between 1992-1996 by Gehry in partnership with a local architect Vlado Milunic, is set in a specific built environment with heritage value, where the requirements were quite imposed [6]. Being an insertion in a built city pattern, the result gives notice on the constituted layout of the city island between the streets – and therefore first idea of design is a fill in form of a predefined extrusion of the space, completing the facades fronts to the streets. Besides that, being a corner insertion, the building was supposed to have a dome to mark through height and specific volumetric shape the intersection of the streets. But the results transform the principle of integration in built pattern with an inner force interpreted as dance that redefined the shapes of the building’s facades imitating justifying these waves on the presence on the water front of river Valtava. What is interesting it is the presence of two main volumes (Fig.4) that are coming out of the facades and they are to be interpreted as the architecture concept of Gehry has defined them, identifying with two persons dancing, as Fred and Ginger famous dancers, one feminine shape and the other masculine, the one that sustains the corner to the streets. Quite imaginative, Gehry’s design proposes here somehow an exercise of imagination through this concept, quite not connected to the city patterns [6]. But still, as local critics were pretty upset on infringement of urban regulations, the iconicity and famous design became an icon for visitors and an example for students in architecture of what star-architecture could be. Here we could say that is the moment where the dancing embrace architecture and everything was starting to flow in a momentary gesture. Also the a noticed nuanced fluidity has been added to the flow intention, and this was expressed architecturally and structurally through metal structure and glass closing, while the Vitra Design Museum and the main body of Dancing House in Prague was still motionless framed as architectural urban features.

Guggenheim Museum Bilbao [3] (Fig.5), built in 1997, marks an important moment on Gehry's work as architectural design, but also in the history of contemporary architecture [6]. The flowing becomes complete separating volumes, increasing volumetric composition, and getting from the author a new idea of conceptual story – the one of landscape contextual reading, alternation, and scaling constituted public space. Still denigrated from the locals citizens and critics, the building and additional developing and cultural networking are defined as a local cultural efflorescence that change the professionals mentality on inserting huge (Fig.6) buildings on valuable sites. The architectural gesture becomes complete when three mutation-steps are made in architecture thought: 1. the double design of spaces – the interior, as functional and activity settings, and – the exterior as image to the city, but also thought as closure of interior scenographic wide spaces (Fig.7); 2. the envelope becomes important as sustainable material and life, dressed with titanium scales (remembering somehow by a dear concept of the architect – the Fish); 3. the thinking of the design project as assimilated with aeronautic and naval design projects, becoming dedicated as soft programming with specific settings for Gehry's project. Both Dancing House in Prague and Guggenheim Museum Bilbao are listed in the case studies for architectural analyses technologies in practice and architectural contextual gestures critics (explained with diagrams and sketches) which are to be notable from 50ies to present in the inspirational unconventional manual edited recently *The elements of modern architecture: understanding contemporary buildings*. [6]

Walt Disney Concert Hall [3] (Fig.8), built between 1999-2003 in Los Angeles, applies the three mutation-steps that Gehry was developing and experimented in Bilbao Guggenheim Museum: 1. the double design thinking and demarche in program; 2. the envelope (Fig.9); 3. architecture project developed with more advanced soft programs and engineers. Further the building accommodates a walkside with gardens (Fig.10) between the shapes of the body of the building in a gesture to innovate within the purpose of design shapes. Both, the last two built projects have metallic structure that follows and sustain shape gestures of architecture; the design is completely computational and also is the fabrication of the sub-ensembles. At Guggenheim Bilbao and W.Disney Concert Hall, Frank Gehry worked together with his “computer technician Jim Glymph adapting/ using CATIA Computer Aided Three-Dimensional Interactive Application software” [7], in fabricating the architectural-structural package design.

Outside the three mutations steps mentioned above, there is to be mentioned a state of the art [4] which statuses through the four analyzed built projects that infers that architecture could be theatrical, spectacular, sculptural [8] at the edge of art field, and, the realization of the design projects have to be a new mastery of innovational process of CAD designing and detailing. This new mastery could be considered a new crafting in architecture, because of level on detailing process that needs skill, talent and dedication for all draftsman in the team: from architects, engineers, designers, etc. Also, a new unconventionality perspective of outer and inner architectures with artistic connotation [3] is present during time in this four analyzed examples. Considered iconic, luxurious, commercial and elitist, by forms and figures, Gehry's architecture has still openness to the wide public, being likeable [8] and considered both experimental and beautiful by a wide variety of public.



Figure 11, 12. LVFC Paris: view from the main street, view from the park. Photo: M.Mihaila, January 2014.

The recent realized project of Gehry in Paris, LVFC (Fig.11) was opened in autumn 2014, is wanted a new icon for a new kind of cultural center and therewith a new kind of museum space. As architectural gesture, the new building is somehow amazing and definitively a masterpiece of architectural-engineering art, translating the old shapes and envelopes to new features, and fresh patents. From the translating the appearing coverings from titanium into glass [9], until the extension of function to a new relation between commerciality and art, is a ling way of decision in architecture design and also in pointing the definite architectural gesture of the author as sculpture. The three mutations remarked before are still present, still another mutation is marked here by the author: the appearance of a third envelope, distanced from the main volumes, opened and anchored from the core of the building – the glassed-metal structured as canvas sails of a giant future-craft-ship (Fig.12).

3. From the Architectural Thought to the Detail – LVFC Paris, F.Gehry

Surnamed Crystal Palace because it “looks like sails, and it looks like a boat, and it looks like a whale, and it looks like a crystal palace that is in the middle of an explosion” [10] LVFC remembers also of the revolutionary iron and glass building of Crystal Palace (architect Joseph Paxton) built in 1851 to host the Great Exhibition that has changed forever the way architects and wide public regard materials, technology [11] and the purpose and understanding of architecture (Fig.13). LVFC has a museum main purpose by definition, but in fact it is more a cultural center dedicated to the foundation. In figures, LVFC building Paris notes: 13.500 square meters – surface “des 12 voiles de verre” (glass envelope surfaces – Fig.14), 19.000 panels of Ductal (white fibered concrete), 7.000 squared meters floor area, 3.850 squared meters of museum spaces, 11 galleries for exhibitions and between 360 and 1.000 places in auditorium [1], and more than 400 people worked in the design project team.

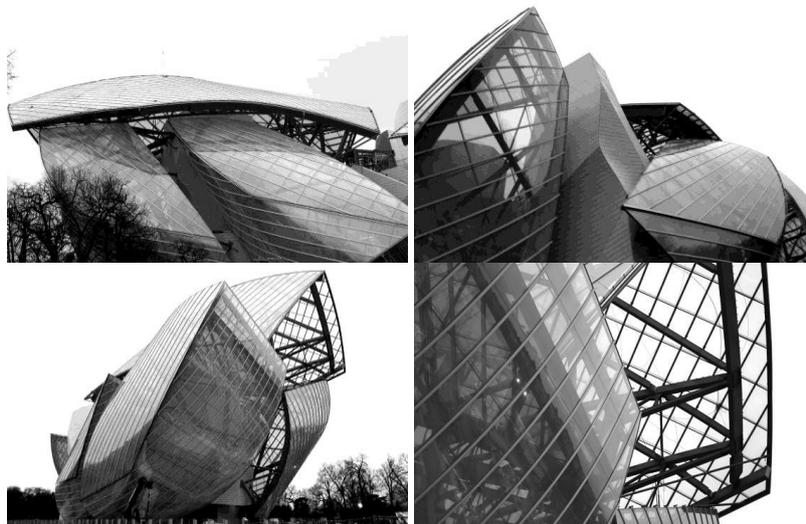


Figure 13, 14, 15, 16. LVFC Paris: detail view from the park, detail view from the street, detail overview from the street, detail. Photo: M.Mihaila, January 2014.

As he announced several years ago, Gehry dreamed to envision and drape all architecture in glass, and to express motion, and the question was: “how to convey change and movement in a structure that is after all static. He drew inspiration from the scudding clouds of John Constable: billowing, evanescent shapes that refused to coalesce into fixed or final form, and bore the notation of the exact time were executed, the orientation of the wind, and the effects of sunlight. *The idea is of a*

cloud made of glass." [4] As opened now, the LVFC building (Fig.15) was labeled by Gehry as volumetric-ship-shaped, "building is light, luminosity and motion" [1].

However this journey from complex shape to detail would not have been possible without significant computational aid, translating the complex design model into a virtual object (CAD model) [12] and translating it into fabrication via a complex process of concurrent engineering [13]. It is very interesting how architecture has been industrialized within this single project, using people and teams located on different continents. According to Nolte and Witt the digitization not only used existing CAD aids and related software but in fact Gehry Technologies developed a complex digital collaborative platform bringing together people and software under the name GTeam [13]. LVFC is an excellent example on how the intelligent and integrated use of software frees architecture from certain technological limitations but also offers a reasonable degree of (cost) control over the fabrication process. In this approach the digital links form and fabrication "as new design tools are developed to link the virtual design environment with the physical environment" [14]. Obviously the integration of advanced computations is not yet common to any project but mainly to large projects undertaken by large architectural offices which like Gehry which have developed over time their own methods of computational design [15]. This process which I call *integrated digital crafting* has allowed the transfer of innovation from the architectural (artistic) realm into technological, digital and manufacturing engineering.

4. Conclusions

From the architectural thought to the detail, three levels of approaching the process of design are to be remarked: 1. demarche's particularities of the architect manner in considering the environmental context - 1.1. as considering the landscape as macro-systemic and its lecturing from a future global perspective understanding, 1.2. approaching the architectural-urban context as built geography understood as macro-scale ensemble, 1.3. textualized concept dedicated to the city, in the dual sense: why-because; 2. notable architectural language – 2.1. Gehry statuses that architecture has interesting connection with art [4] and that he "learnt more from painters than from sculptors" [8], 2.2. raising awareness through adaptive surfaces, with landscape shades, 2.3. getting out of human scale, mass developments, but broken by surfaces in columns that remember kind of structural order of the city context, 2.4. theater phony approach on architecture, a relaxed theatre-like-atmosphere (I would say) – architecture could be a valuable décor, 2.5. theatrical scenographic architecture, based on an evolutive personal manner fashion, 2.6. double thought on integrated approach enveloping design [16] of the building: one functional, and the other(s) expressionist as reflection for the environment, 2.7. relational function-form somehow insincere but along researched, 2.8. diverse ways of surfaces closures and materials, all new, efficient and technological - lifetime of the building -, interior and exterior spaces disjunctive, 2.9. surfaces and structural ribbons, and special structures mandatory; 3. passion for details and manufacturing architecture in search for new technologies and innovation - 3.1. avant-garde architectural designing, based on innovation in project and joints, with successive upgrade along the building fabrication process, but also on modeling successive building projects, 3.2. usage of Digital Project by Gehry Technologies , an innovative software dedicated to the architecture manufacturing process, based on CATIA software and produced by Dassault Aviation, 3.3. the sustainable issues thought from the thought to the detail: "the environmental targets of the foundation are so high that it has been chosen as the pilot project for the preparation of a new HQE (high environmental quality) standard dedicated to cultural buildings." [1]

Acknowledgements

This work is part of postdoctoral project Types of innovation in cultural spaces.]working with/in[

cultural spaces_tradition and innovation., and is supported by a grant of the Romanian Ministry of Education, CNCS – UEFISCDI, project number PN-II-RU-PD-2012-3 -0515.

6. References

- [1] Fondation Louis Vuitton. The Building. The Construction. The site. *Official website*, 2014. <http://www.fondationlouisvuitton.fr/en.html>
- [2] Gausa M. The Metapolis dictionary of advanced architecture: city, technology and society in the information age. Barcelona: Actar; pp. 82, pp. 242, 2003.
- [3] Mathewson CCM, Gehry FO. Frank O. *Gehry: Selected works: 1969 to today*. Richmond Hill, Ont: Firefly Books, 2007.
- [4] Meyer EDC. *Frank Gehry: on line*. New York: Princeton University Art Museum, 2008.
- [5] Jodidio P. *Architecture now! Museums*. Cologne: Taschen, 2010.
- [6] Radford A, Morkoc, SB, Srivastava A. *The elements of modern architecture: understanding contemporary buildings*. London: Thames & Hudson; pp. 164, pp. 184, 2014.
- [7] Sklair L. Iconic Architecture and the Culture-ideology of Consumerism. *Theory, Culture and Society*. Vol. 27, pp. 135-159, 2010.
- [8] Rauterberg H. *Talking architecture: interviews with architects*. Munich: Prestel; pp. 57-65, 2008.
- [9] Rus M. Frank Gehry's Masterful Foundation Louis Vuitton opens in Paris. *Architectural Digest* online, October, 2014. <http://www.architecturaldigest.com/architecture/2014-10/frank-gehry-fondation-louis-vuitton-arts-center-article.print>
- [10]Goldberger P. Gehry's Paris Coup. *Vanity Fair* online, September, 2014. <http://www.vanityfair.com/culture/2014/09/frank-gehry-fondation-louis-vuitton-paris>
- [11]Silver P, McLean W, Whitsett D. *Introduction to architectural technology*. London: Laurence King Publishing, 2008.
- [12]Shelden DR. Information, Complexity and the Detail. *Architectural Design*. Vol. 84, pp. 92-97, 2014.
- [13]Nolte T, Witt A. Gehry Partners' Fondation Louis Vuitton: Crowdsourcing Embedded Intelligence. *Architectural Design*. Vol. 84, pp. 82-89, 2014.
- [14]Peters B. Computation Works: The Building of Algorithmic Thought. *Architectural Design*. Vol. 83, pp. 8-15, 2013.
- [15]Boland RJ, Lyytinen K, Yoo Y. Wakes of Innovation in Project Networks: The Case of Digital 3-D Representations. *Architecture, Engineering, and Construction. Organization Science*. Vol. 18, pp. 631-647, 2007.
- [16]Lovell J. *Building envelopes: An integrated approach*. New York: Princeton Architectural Press, 2010.